PRELIMINARY

CameraMan STUDIO

Visibly Better. With The New Shape Of Studio Automation.

CSS-2000-N/P

ParkerVision, the camera tracking and automation experts, introduce CameraManSTUDIO™, the first fully integrated studio automation system to give one person control over Multiple CameraMan Cameras, Digital Video Effects, Digital Audio Mixing, VCR control, Teleprompter, Character Generation and Transition Macros™ – all from one Graphical User Interface.

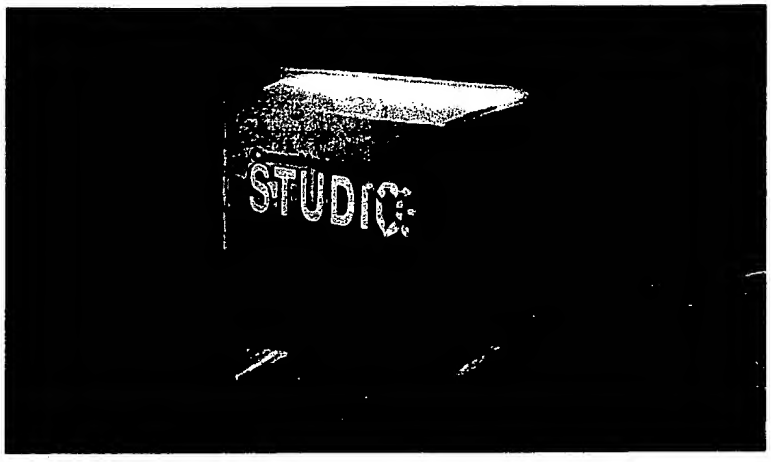
CameraManSTUDIO allows directors to manage and control a multi-camera studio environment with limited resources. The powerful Transition Macro feature allows directors to spend their pre-production time inventing new shots, then performing them with the touch of a button. CameraManSTUDIO's revolutionary studio automation capabilities adds creativity and value to:

- Independent Studios both large and small
- Corporate Production Studios
- Health Care Production Studios
- Government Production Studios
- Education Production Studios
- Religious Broadcast and Studio Productions
- Small Cable and Public Broadcast Networks
- Law Enforcement Production Studios

The integrated CameraMan camera systems also incorporate all of ParkerVision's exclusive camera-control technology with features such as autoTRACK™, Location Presets, and WhisperDRIVE Plus™.

System Features

- Common graphical user interface for live video production including camera control, video switching and special effects, audio mixing, titling, and VCR control.
- Transition Macros used to store complex production sequences, then recall them with the click of the mouse.
- Save and recall complete studio configurations.



Camera Control Features

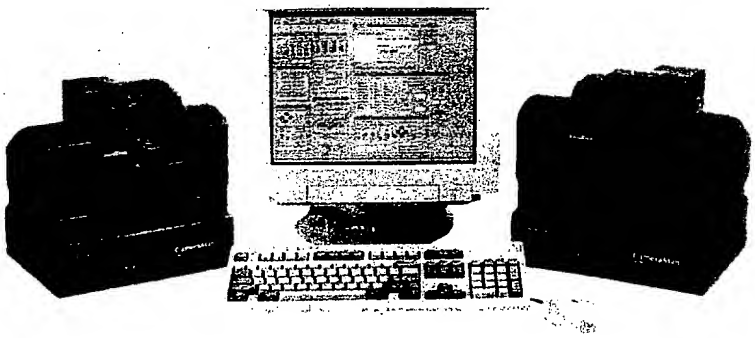
- Real-time digital camera control.
- Store and recall 125 location presets (pan, tilt, zoom, focus and image settings) per camera.
- Adjust all camera parameters including gain, paint, master pedestal, etc.
- On-screen HOT Keys to quickly store and recall autoTRACK Views™ and Location Presets.
- Virtual joystick pan and tilt gives you real-time control over each camera's movement.
- Variable speed controls for zoom, pan, tilt and presets.
- Store and recall camera shot profiles.

Studio System Features

- NTSC or PAL for use around the world.
- Digital video effects unit.
- 8 bit 4:2:2 processing
- SHOT Profiler™
- Transition Macros.
- Digital audio mixer
- External machine control
- 8 video inputs (4 Y/C and 4 component).
- 8 audio inputs.

Options

- Enhanced effects and chroma-keying.
- Character Generator
- CameraMan SHOT Director™ for hands-on camera control.
- CameraMan SCRIPT Viewer™ for interactive teleprompter applications.
- Y/C and component expandable.
- 1-CCD and 3-CCD CameraMan cameras.



Why CameraManSTUDIO?

For these features available only from ParkerVision:

- Communication and studio directors can maximize their talents through the use of CameraMan's proprietary autoTRACK™ technology. With automated presenter "tracking", the director can focus efforts on other camera views and shot selections.
- All studio functions are centralized and controlled from the CameraManSTUDIO.
- CameraManSTUDIO provides real-time camera control.
- 17" Color Monitor, mouse and keyboard provide maximum control flexibility and ease-of-operation.
- Quality audio and video output for satellite, cable, public-switched networks, microwave transmission - or for CD-ROM, videotape, and digital storage.

For more information, or a product demonstration, contact us at:

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visit our website at http://www.parkervision.com

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Video Effects:

- Wipe Generator: Vertical, horizontal, corner, diagonal, split, box, diamond, clock, and arrow. Border size, rotation, softness, and color control.
- DVE Wipes: Arbitrary transitions, scaled, rotated, and modulated by the DVE.
- Mixing: A/B wipe/mix, DVE wipe on/off, Fade-to-black
- Input effects:
  - Pixellation, solarization, posterization
  - Color correction
  - Rectangular border and crop with softness control
  - Full color internal pattern generator
  - Still store
- Digital Effects:
  - Dual source page turns/rolls, double page turns/rolls.
  - Dual source page peels, and quad peels.
  - Dual source sphere, cinema, discs, goblets.
  - Dual source push on/push off.
  - Dual source twisty splits and corner pins.
  - Quad split, multi-tile, and ripple and flag wave effects.
  - 3D rotation with perspective.
  - Dual light sources with high-lights and low-lights.
  - Drop shadow.
  - Front/back source selection.
  - 1/16th pixel store resolution.

Optional Video Effects:

- Background Source: 3rd live input source for use as background.
- Trail Store Effects:
  - Drop shadow, arbitrary position, color and transparency.
  - Video drop-field/frame frozen into memory.
  - Video trail
  - Video, key texturing
  - Video, key decay
  - Video, key Sparkle
  - Independent delay control for video decay, key decay, video sparkle and key sparkle.
  - Trail modulation
- Wipes: 100 additional wipe patterns including circle, heart, matrix, and random matrix.
- Keyer: Two fully independently controllable chroma keyers, DVE and DSK.

Video Inputs and Outputs:

- Video Inputs: 8 composite, 4 Y/C, 4 component
- Format: NTSC, PAL
- Signal: Composite: BNC, 75 Ohm, 1Vpp.
  Y/C: 4-pin mini DIN,75 Ohm, Y: 1Vpp, C: .3Vpp.
  Y, Pb, Pr: BNC, 75 Ohm, .7Vpp.
- Key Input: 7Vpp, with or without .3Vpp sync
  BNC
- Reference Input: Black Burst .3Vpp burst, .3Vpp sync.
  2 x BNC, 75 Ohm, loop-through.
- Video Outputs: Program: 2 Composite: BNC, 75 Ohm, 1Vpp.
  2 Y/C: 4-pin mini DIN, 75 Ohm, Y: 1Vpp, C: 0.3Vpp.
  2 Analog Component: BNC, 75 Ohm, .7Vpp.
  Preview: RGB or Analog Component BNC, 75 Ohms .7Vpp.
- Reference Output: Black Burst
  4x BNC, 75 Ohms, 1Vpp.

Video Signal Performance:

- Standards: NTSC, PAL
- Processing: 8-bit 4:2:2
- Luma sampling: 13.5 MHz
- PbPr sampling: 6.75 MHz
- Synchronization: Dual input frame synchronizers.
- Frequency Response: Luma(Y): +0.5/-1dB to 5.5MHz
  Pb Pr: +0.5/-1dB to 2.75MHz
  Differential gain: less than 2%
  Differential phase: less than 2°
  Y-C delay: 20ns
- Signal-Noise Ratio: Y, Pb, Pr: input: -56dB (unweighted, bandlimited)
  Composite input: -53dB (unweighted, bandlimited)

Audio Inputs and Outputs:

- Audio Inputs: 8
- Signal: 1/4" TRS, Balanced +4dB, unbalanced -10dB
- Audio Outputs: 8.
- Signal: 1/4" TRS, Balanced +4dB, unbalanced -10dB

Audio Signal Performance:

- Frequency Response: 20Hz-20kHz, +0/-0.25 dB, fs=48kHz
- THD @ 1kHz: .003%
- Signal to Noise: 96dB
- Crosstalk @ 1kHz: -102dB
- Sampling Rates: 44.1kHz & 48kHz
- Resolution: 16-bits
- Converters: Input: Dual 16-bit delta-sigma A/D converter, 64x oversampling.
  Output: Dual 16-bit delta-sigma D/A converter, 8x oversampling.

VCR Control:

- Control Ports: 1 source VCR and 1 record VCR.
- Signal: RS232, RS422, RS485.
- Protocol: Sony Betacam™

Standard System Configurations

- CSS-2000-N/P: Signal Processor, Control Processor, keyboard, mouse, 17" color monitor.

Optional Equipment

- CPT-2000-A1N/A1P: General pan/tilt camera (1-CCD)
- CPC-2000-A1N/A1P: Presenter camera (1-CCD)
- CPT-2013-A3N/A3P: General pan/tilt camera (3-CCD, 13x lens)
- CPC-2013-A3N/A3P: Presenter camera (3-CCD, 13x lens)
- CPT-2017-A3N/A3P: General pan/tilt camera (3-CCD, 17x lens)
- CPC-2017-A3N/A3P: Presenter camera (3-CCD, 17x lens)
- EPF-2000: Full signal Video Expansion Processor. Expands to a total of 8 Composite, Y/C, or component video inputs.
- EPY-2000: Y/C Video Expansion Processor. Expands to a total of 8 Y/C video inputs.
- EPA-2000: Audio Expansion Processor. Expands to a total of 8 audio inputs.
- EPV-2000: VCR Expansion Processor. Adds an additional 3 VCR control ports.
- CRT-2021: 21" Computer Monitor
- JSC-2000: CameraMan SHOT Director (non-tracking)
- JSC-2100: CameraMan SHOT Director (tracking)
- SVS-2010: SCRIPTviewer system including processor with scripting software, 15" color monitor, keyboard, mouse, 10" flat panel display, mounting brackets.
- SVS-2012: SCRIPTviewer system including processor with scripting software, 15" color monitor, keyboard, mouse, 12" flat panel display, mounting brackets.

Additional ParkerVision Studio Products

The **CameraMan SCRIPT Viewer™** is an interactive teleprompting system controlled via on-screen software, or by the talent with wireless remote control.

The **CameraMan CONTROL Center™** is the ultimate camera controller, allowing one person to manipulate up to 64 cameras from one location. It is fully upgradeable to a CameraManSTUDIO.

The **CameraMan SHOT Director™** allows hands-on control of up to 16 cameras from one location.

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